

### Claim Amendments

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-27. (Cancelled)

28-35 (Cancelled)

36. (Previously Presented) A method, comprising:  
mapping addresses in a single address space to resources within a set of multiple programmable units integrated within a processor, the single address space including addresses for different ones of the resources in different ones of the multiple programmable units; and

providing data access to a resource within a first of the multiple programmable units to a second one of the multiple programmable units in response to a data access request of the second one of the multiple programmable units specifying an address within the single address space, wherein there is a one-to-one correspondence between respective addresses in the single address space and respective resources within the multiple programmable units.

37. (Previously Presented) The method of claim 36, further comprising receiving a command specifying the address in the single address space.

38. (Previously Presented) The method of claim 37, wherein the command comprises one selected from the following group: a read command and a write command.

39. (Previously Presented) The method of claim 37, wherein the receiving the command comprises receiving the command from a programmable processor.

40. (Previously Presented) The method of claim 39, wherein the programmable processor comprises a programmable processor integrated within the processor; and

wherein the multiple programmable units comprise multiple programmable engines and the programmable processor.

41. (Previously Presented) The method of claim 36, wherein the resources within the set of multiple programmable units comprises register locations within the multiple programmable units.

42. (Previously Presented) The method of claim 36, wherein the single address space comprises addresses corresponding to shared resources external to the multiple programmable units.

43. (Previously Presented) The method of claim 36, wherein the multiple programmable units comprise multiple programmable multi-threaded units.

44-45. (Cancelled)